

### **REMARKS/ARGUMENTS**

By this amendment, Claims 1, 17, 49 and 50 are amended and Claims 51-56 are added. No Claims have been canceled. No new matter has been added. Therefore, Claims 1-2, 5-10, 13-28, 30-44 and 46-56 are pending in the application.

Support for the amendments to Claim 1 can be found throughout Applicants' specification including, for example, in paragraphs [0045]-[0048].

Support for new Claims 52 and 54 can also be found throughout Applicants' Specification including, for example, in paragraph [0047].

New Claims 55 and 56 correspond respectively to previously canceled Claims 3 and 11.

Each issued raised in the Office Action mailed December 8, 2008 ("Office Action") is addressed hereinafter.

### **CLAIM REJECTIONS – 35 U.S.C. § 102**

Claims 1-2, 5-10, 13-28, and 30-44 and 46-50 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Pat. Pub. No. 2002/0156685 ("*Ehrlich*"). Applicants respectfully traverse.

To anticipate a claim of the present application, *Ehrlich* must teach or reasonably suggest "each and every element" of the claim "in as complete detail as is contained in the claim". (MPEP § 2131) Further, while the claim may be given its "broadest reasonable interpretation" for the purposes of making an anticipation determination, the interpretation must be "consistent with the specification" and must be "consistent with the interpretation those skilled in the art would reach." (MPEP § 2111)

### CLAIM 1

Present Claim 1 as amended recites:

1. A method for handling requests for web services, the method comprising the computer-implemented steps of:
  - receiving at a web services broker, from a particular instance of a client application, a request for information, wherein said request includes an identification of a particular web service from which said particular instance wants said requested information, the request having first input data, **the first input data being in a form that cannot be used by said particular web service to service requests for said information**, the first input data including a value that corresponds to a parameter required by the particular web service;
  - wherein the particular web service serves as the source of said requested information, and is separate from the web services broker;
  - wherein the particular instance of said client application is separate from the web services broker;
  - in response to receiving said request, the web services broker
    - accessing, based on said identification of said particular web service, transformation information that specifies,
      - how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information**, and
      - how to invoke said particular web service in a manner required by said particular web service, to obtain said requested information from said particular web service;
    - transforming said first input data to said second input data, wherein transforming the first input data includes changing said value, based on said transformation information, to create a changed value**; and
  - invoking, in said manner required by said particular web service, said particular web service to obtain said requested information from said particular web service;
  - wherein said requested information is obtained from said particular web service by providing the changed value to the particular web service as a value for said parameter.**

Applicants respectfully submit that at least the above-bolded features of Claim 1 are not taught or in any way suggested by *Ehrlich*.

In the Advisory Action mailed February 26, 2009, the Examiner asserts that *Ehrlich* satisfies the "transforming said first input data to said second input data" feature of Claim 1. Applicants respectfully disagree. However, to expedite allowance of the claims of the subject application, Claim 1 has been amended herein to resolve any potential ambiguity of previously presented Claim 1. For example, Claim 1 now makes clear that the "first input data" included in

the request from the particular instance of the client application includes "a value that corresponds to a parameter required by the particular web service". The web services broker, in response to receiving the request, transforms the first input data including "changing said value, based on said transformation information, to create a changed value." The "requested information" is obtained "by providing the changed value to the particular web service as a value for said parameter."

The method of Claim 1 may be useful, for example, to allow a first team of engineers to develop and deploy the particular instance of a client application without concern to what form the particular web service expects input data to be in. An entirely different team of engineers, at a later time, could then deploy the web services broker along with transformation information that brokers requests from the particular instance of the client application to the particular web service. Specifically, since the web services broker is not in control of how the client application forms the input data included in requests, the web services broker provides transformation information that specifies how to transform input data associated with a request to produce transformed input data that can be used by the particular web service to provide the requested information to the particular instance of the client application. The method of Claim 1 is not taught or in any rendered obvious by *Ehrlich*.

#### *EHRLICH'S VIRTUAL SHOPPING CART SYSTEM*

In contrast to the web services broker of Claim 1, *Ehrlich's* shopping system is in control of the form of the input data provided by users of the shopping system. For example, *Ehrlich's* shopping system provides a user interface that allows a user to search for purchase items, add items to a virtual shopping cart, and submit a purchase request for items added to the shopping cart. Since *Ehrlich's* shopping system provides the interface by which a user submits purchase

requests to the shopping system, *Ehrlich's* shopping system is in control of the form of the input data included in the requests.

Not surprisingly then, *Ehrlich's* virtual shopping system does not describe the claimed "transformation information" that specifies "how to **transform** said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information", as featured in Claim 1. *Ehrlich* does describe a "protocol broker" that "chooses for each purchase request, the most appropriate **protocol** and **communication mode**" for communicating with a merchant site. (*Ehrlich*, [0080]) For example, the protocol broker may choose to communicate with a merchant site using the Hypertext Transfer Protocol (HTTP) or the Simple Object Access Protocol (SOAP). (*Id.*) However, Claim 1 is not just about transformation information that specifies the protocol for a particular web service. Claim 1 expressly requires transformation information that specifies "how to transform" input data provided in a request. In other words, picking the **form of delivery** of a message is entirely different from transforming content in the message itself.

In rejecting Claim 1, the Office Action appears to equate the "communication schema" of *Ehrlich* with the claimed "transformation information" for "transforming said first input data to said second input data", as featured in Claim 1. *Ehrlich* describes creating a "communication schema" for each merchant that indicates "the required protocol" and "has place holders for the item ID, session ID, etc." (*Ehrlich*, [0088]) "During the purchase request, the protocol broker replaces the place holders with the actual values or items required by the merchant..." (*Id.*) However, replacing place holders is entirely different from transforming input data from a form that cannot be used by a merchant into input data that can be used by the merchant. Replacing place holders is entirely different because the input data in *Ehrlich's* purchase request **that is provided to the merchant** does not change forms as a result of replacing the place holders. For

example, the values for <Title> and <ISDN> in the example purchase request described in paragraphs [0101]-[0112] of *Ehrlich*, if provided to a merchant, would not be transformed by *Ehrlich's* protocol broker. Rather, the protocol broker would simply replace the appropriate place holders in the communication schema for the merchant with values **in the same form** as included in the purchase request.

Further, since *Ehrlich* does not describe transforming input data from a form that cannot be used by a merchant into a form that can be used by merchant, *Ehrlich* cannot possibly teach or suggest "changing said value, based on said transformation information, to create a changed value", as featured in Claim 1. *Ehrlich's* protocol broker does not in any way alter, transform, or change values in a purchase request that correspond to parameters required by a merchant. Instead, as explained above, *Ehrlich's* protocol broker merely substitutes place holders with values from a purchase request that correspond to parameters required by a merchant. This is not the same as "changing said value, based on said transformation information, to create a changed value", as featured in Claim 1 because substituting a place holder with a value does not change the value to create a changed value.

Indeed, given that the *Ehrlich's* shopping system is in control of the form of the purchase request from the shopper, one skilled in the art would conclude that the input data in a purchase request **is** in a form that the merchant site can use. Further, the disclosure of *Ehrlich* would lead a skilled artisan to conclude that, to the extent that *Ehrlich's* shopping system transforms a purchase request, it does so only with respect to the protocol used to convey the purchase request to a merchant, and not with respect to input data required as a parameter by the merchant. For example, *Ehrlich* states at paragraph [0079]:

[0079] With reference to FIG. 3B, and at step 375, the shopping coordinator 100 creates a purchase request for each item of the virtual shopping cart and forwards these requests to the protocol broker 105 using, for example, SOAP as the communication protocol. To proceed with the purchase of items in the virtual shopping cart, the protocol broker 105 communicates with each merchant web site represented in FIG. 2, for example, as merchant site A (180) and merchant site B (185), by using the merchant's **preferred protocol**.

Each merchant might use a **different protocol** such as HTTP, SMTP, or SOAP. Therefore, the protocol broker 105 translates **the SOAP protocol** used by the shopping coordinator 100 into a purchase request that the merchant can understand.

This cited portion of *Ehrlich* refers to a protocol broker translating the "protocol" of the purchase request but does not in any way teach or suggest changing values in the purchase request that correspond to parameters required by a merchant to produce changed values. One skilled in the art would conclude from this cited portion and *Ehrlich* as a whole, that *Ehrlich's* protocol broker simply forwards values in a purchase request that correspond to parameters required by a merchant site – albeit using a different protocol – on to the merchant site without changing those values. Consequently, Applicants respectfully submit that *Ehrlich* does not teach or in way suggest "transforming said first input data to said second input data, wherein transforming the first input data includes changing said value, based on said transformation information, to create a changed value", as featured in Claim 1.

Based on the foregoing, Applicants respectfully submit that *Ehrlich* does not teach or suggest each and every feature of Claim 1 in as complete detail as contained in Claim 1. Claim 49 recites similar features and is allowable over *Ehrlich* for the same reasons.

## CLAIM 2

Claim 2 depends from Claim 1 and is therefore allowable over *Ehrlich* for the reasons given above with respect to Claim 1. In addition, Claim 2 recites additional features that independently render Claim 2 patentable over *Ehrlich*. For example, Claim 2 recites:

receiving, from said particular web service, said requested information; and transforming, based on said transformation information, said requested information to data that said client application can use.

Thus, in Claim 2, the requested information received from the particular web service is transformed to data that the requesting client application can use.

With regard to Claim 2, the Advisory Action states "Ehrlich discloses Figure 2 where it teaches two-way communication and transformation between merchant 'a' and 'b'." However, while *Ehrlich* may describe two-way communication between the protocol broker and a merchant it does not teach or suggest two-way transformation as featured in Claim 2.

*Ehrlich* describes only creating purchase requests that merchants can understand. Nothing in the cited portion of *Ehrlich* or elsewhere in *Ehrlich* describes the protocol broker transforming, based on accessed transformation information associated with a merchant, information received from the merchant site into data that user or shopper can use. In other words, *Ehrlich* describes only one-way transformations (requests from client to service) while Claim 2 is about two-way transformations (transformations of requests from client to web service and transformations of responses returned from the web service to the client). Thus, Claim 2 recites additional features that independently render Claim 2 patentable over *Ehrlich*.

## CLAIM 5

Claim 5 recites:

The method of Claim 1, wherein said transformation information includes a mapping of first input data from a first particular client application to second input data that a first web service can use, and a mapping of first input data from a second particular client application to said second input data that said first web service can use, and wherein said first input data from said first particular client application has a different form than said first input data from said second particular client application. (Emphasis added.)

Claim 5 is about a many-to-one transformation. In particular, Claim 5 features transformation information for mapping, to the same "second input data", input data from two clients, where the form of the input data from one client is different from the form of the input data from the other client. In contrast, in *Ehrlich*, purchase requests for a particular item from a

particular merchant will have the same form (i.e., the form will not vary from client to client). For example, using an example provided in *Ehrlich*, the form of the input data in the purchase request for the book titled "Professional Active Server Pages 3.0" described in paragraphs [0101]-[0112] of *Ehrlich* would be same regardless of which user or shopper submitted the purchase request. Thus, it would not make sense for *Ehrlich*'s protocol broker to use transformation information like the transformation information featured in Claim 5 that maps, to the same "second input data", input data from two clients, where the form of the input data from one client is different from the form of the input data from the other client. Consequently, Applicants respectfully submit that Claim 5 recites additional features that independently render Claim 5 patentable over *Ehrlich*.

#### CLAIM 17

Claim 17 recites:

17. A method for handling requests for web services, the method comprising the computer-implemented steps of:
  - receiving at a web services broker, from a particular instance of a client application, a request for information, **wherein said request includes an identification of a particular instance of said client application, the request having first input data, the first input data being in a form that cannot be used by a particular web service to service requests for said information**, the first input data including a value that corresponds to an input parameter required by the particular web service;
  - wherein the particular web service serves as the source of said requested information and is separate from the web services broker;
  - wherein the client application is separate from the web services broker;
  - in response to receiving said request, based on said identification of said particular instance of said client application, the web services broker accessing transformation information;**
  - wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information;**



**wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information;**  
**based on said transformation information, the web services broker transforming said first input data to said second input data, wherein transforming the first input data includes changing said value, based on said transformation information, to create a changed value;**  
the web services broker invoking, in said manner required by said particular web service, said particular web service to obtain said requested information from said particular web service;  
**wherein said requested information is obtained from said particular web service by the web services broker providing the changed value to the particular web service as a value for said input parameter.**

Applicants respectfully submit that at least the above-bolded features of Claim 17 are not taught or in any way suggested by *Ehrlich*.

The Office Action contends that *Ehrlich's* "merchant protocol data" is equivalent to the transformation information of Claim 17. (*See Office Action*, page 6). However, the merchant protocol data of *Ehrlich* corresponds to the **merchant** specified in the purchase request and **not any sort of identification of the particular instance of the client application** making the purchase request. For example, paragraph [0113] of *Ehrlich* states with respect to an example purchase request "[t]he protocol broker analyzes and parses the SOAP purchase request, retrieves the merchant protocol data for A1Books.com from the merchant schema database 120..." (Emphasis added.) In this example, "A1Books.com" identifies the merchant, not the particular instance of the client application that sent the purchase request. In contrast, Claim 17 expressly requires that the "in response to receiving said request, **based on said identification of said particular instance of said client application**, the web services broker accessing transformation information".

Furthermore, Claim 17 expressly requires that the claimed "transformation information" include "**a mapping** between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said

particular instance prefers said particular web service to service requests from said particular instance for said requested information." *Ehrlich's* merchant protocol data does not contain any sort of mapping between an identification of a particular instance of a client application and a preferred merchant. Consequently, *Ehrlich* also does not teach or suggest "wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information", as featured in Claim 17.

Additionally, the following bolded features of Claim 17 are similar to features recited in Claim 1 discussed above

- receiving at a web services broker, from a particular instance of a client application, a request for information, wherein said request includes an identification of a particular instance of said client application, **the request having first input data, the first input data being in a form that cannot be used by a particular web service to service requests for said information**, the first input data including a value that corresponds to an input parameter required by the particular web service;
- wherein the particular web service serves as the source of said requested information and is separate from the web services broker;
- wherein the client application is separate from the web services broker;
- in response to receiving said request, based on said identification of said particular instance of said client application, the web services broker accessing transformation information;
- wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information;
- wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information;
- based on said transformation information, the web services broker transforming said first input data to said second input data, wherein transforming the first input data includes changing said value, based on said transformation information, to create a changed value;**
- the web services broker invoking said particular web service to obtain said requested information from said particular web service;

**wherein said requested information is obtained from said particular web service by the web services broker providing the changed value to the particular web service as a value for said input parameter.**

For the reasons given above with respect to Claim 1, Applicants respectfully submit that *Ehrlich* also does not satisfy the above-bolded features of Claim 17.

Based on the foregoing, Applicants respectfully submit that *Ehrlich* does not teach or suggest each and every feature of Claim 17. Claim 50 recites similar features and is allowable over *Ehrlich* for the same reasons.

#### REMAINING CLAIMS

The pending claims not discussed so far are dependant claims that depend on an independent claim that is discussed above. Because each dependant claim includes the features of claims upon which they depend, the dependant claims are patentable for at least those reasons the claims upon which the dependant claims depend are patentable. Removal of the rejections with respect to the dependant claims and allowance of the dependant claims is respectfully requested. In addition, the dependent claims introduce additional features that independently render them patentable. Due to the fundamental differences already identified, a separate discussion of those features is not included at this time.

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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